

## Chapter Ten

# Water and Sewer

### Background

The *Carroll County Water and Sewerage Master Plan* was originally developed and is updated periodically through the joint cooperation of Carroll County and the municipalities that own and operate community water and sewer systems. This cooperation eliminates the duplication of effort on the part of the municipalities and county, and provides for coordination on an important community planning tool.

This chapter provides an overview of water and sewer. However, for the purposes of completeness, the *Carroll County Water and Sewerage Master Plan* is incorporated herein by reference as part of Westminster's Comprehensive Plan by reference. The following excerpts from the 1994 *Carroll County Water and Sewerage Master Plan* provide introductory information regarding the legal requirements for the plan, as well as its purpose and goals. The entire *Carroll County Water and Sewerage Master Plan* is available for review at the Department of Planning and Public Works at City Hall.

### Introduction

Since 1966, the State of Maryland has required each county in the State to prepare and adopt a comprehensive water and sewerage plan. As stated in Title 9, Subtitle 5, of the Environmental Article of the Annotated Code of Maryland ---

The governing body of each county shall adopt and submit to the Department a county plan that deals with water supply systems, sewerage systems.... From time to time, the governing body of each county shall submit amendments to or revisions of the county plan, as the governing body deems necessary or as may be required by the Department....

This Master Water and Sewerage Plan encompasses all of Carroll County including all incorporated towns and cities. The State law further requires that, "County plans shall be reviewed by the governing body of the county at least once every 3 years under a schedule adopted by the Department."

The Carroll County Commissioners adopted the first water and sewerage plan in 1964 that was prepared by Whitman Requardt and Associates. Since then the plan has been periodically and continuously revised with the most recent revision superseding the previous plans.

This plan has been developed in cooperation with the incorporated towns that own and operate their own public community water and/or sewerage systems in the County.

The plan concerns itself mainly with the basic system facilities. For water, this includes water supply facilities such as wells, dams, or reservoirs, storage tanks, pumping stations, and

feeder mains which relate to serving large areas. For sewerage systems, it includes interceptors, pumping stations, force mains, and sewage treatment plants. Street water mains and sewer laterals are not included. In areas of planned development their design depends primarily on subdivision arrangements of each specific tract of land.

In addition to the requirements of State law, various agencies have specific regulations applicable to the preparation of the Master Water and Sewerage Plan and the subsequent development of actual facilities. Those agencies include the Maryland Department of the Environment, Maryland Department of Natural Resources, the Carroll County Planning and Zoning Commission, and the Carroll County Department of Public Works.

The significant state regulations include:

1. Regulation 08.05.02 - Water Appropriation or Use.

Governs the withdrawal, movement, diversion, or use of water in or from its source of natural occurrence.

2. Regulation 26.03.01 - Regulations for Planning Water Supply and Sewerage Systems.

Governs the preparation and submission of this and all County master plans for public water supply and sewerage systems.

3. Regulation 26.04.02 - Sewage Disposal and Certain Water Systems in the counties of Maryland where a public sewage system is not available.

Governs sewage disposal installations and certain water systems on-site where no public systems are available.

4. Regulations 26.04.03 - Regulations Governing Water Supply and Sewerage Systems in the Subdivision of Land in Maryland.

Governs water supply and sewage disposal installations when land is subdivided in Maryland.

5. Regulations 26.08.01 through 26.08.08 - Water Pollution Control Regulations.

Provide water quality standards and effluent limitations both general and specific for all of the waters of the State, to protect them for reasonable and lawful water uses.

6. Regulation 26.04.01 - Maryland Water Conservation Plumbing Fixtures Act.

Requires that new plumbing fixtures which are installed are a type designed to conserve water.

7. Regulation 26.04.04 - Well Construction.

Governs construction and approval of water supply wells.

This Water and Sewerage Master Plan is administered, implemented, and developed in accordance with:

1. The Code of Public Laws of Carroll County.
2. Carroll County Subdivision Regulations.
3. Carroll County Zoning Ordinance.
4. The applicable zoning ordinance and subdivision regulations of the County's eight incorporated towns.
5. Building Officials and Code Administrators Code (BOCA).
6. Maryland Water Conservation Plumbing Fixtures Act (MWCPFA).

MWCPFA is administered by the Carroll County Bureau of Permits and Inspections. Plumbing inspections are based on the Maryland State Plumbing Code and the Carroll County Plumbing Code. The State Code requires that the conservation legislation be followed. Issuance of a Use and Occupancy Permit is assurance that the State Plumbing Code has been followed and therefore the MWCPFA enforced.

## **Purpose**

The purpose of the Ten-Year Water and Sewerage Plan is to provide for the orderly development and expansion of water and sewerage systems in the County and to accomplish the following objectives:

1. Be coordinated and consistent with the County Master Plan as required by State law.
2. Further the health and welfare of citizens residing or working in Carroll County through the development of adequate water and sewer systems, including the following:
  - a. Ensure a dependable and ample supply of water for drinking, irrigation, recreation, and stream augmentation for present and future populations.
  - b. Dispose of wastewater in a manner that will not degrade, and where possible, will improve the surface and groundwater quality of Carroll County.

- c. Correct sanitary and water supply problems by using the most effective and economical water and sewer technologies and methods.
3. Schedule and set priorities for water and sewer projects based on an evaluation of facilities usage, the need for upgrade and/or expansion, public health considerations, and planned growth patterns as shown on the County Master Plan. (See Table 10.1)

#### Utility Extension

In August 2002, The Mayor and Common Council adopted Good Cause Waiver Criteria for the extension of public water and sewerage beyond the corporate limits of Westminster. That legislation requires new or redevelopment projects to be in compliance with the Town/County Agreement. That agreement stipulates that if the property is contiguous to the corporate limits, the project must initiate annexation into the City of Westminster if it is to be served with public water and sewer. If the property does not meet the legal test for annexation, its owner must file a Good Cause Waiver with The Mayor and Common Council. If approved, the applicant must enter execute an “Intent to Annex” agreement with the City of Westminster which is recorded in the Carroll County Land Records.

#### Drought Management

During the summer of 2002, the State of Maryland experienced a severe drought required the City to take extensive emergency measures to ensure adequate water was in the system to serve the entire service area. In response to the drought, The Mayor and Common Council adopted a “Drought Management Plan” which provides for a series of water restrictions once drought conditions have achieved a certain measurable standard. By the adoption of this plan, it is not necessary to seek legislative approval to impose water restrictions on all users of the system. This plan also authorizes all police personnel and Westminster Code Officials to issue citations against any person who violates water restrictions.

As a result of the drought, The Mayor and Common Council made it a priority to find alternative sources of water. In that regard, City staff is working toward providing an emergency water connection between the Medford Quarry and the Cranberry Water Treatment Plant. Westminster is also pursuing other viable water sources.

#### Water Treatment

The Cranberry Water Treatment Plant was constructed in 1921 and additional units were built in 1964 and 1976. The technology in the existing water plant has gone well beyond its useful life. In June 2002, WATEK Engineering found significant deficiencies and identified infrastructure improvements that are needed to upgrade the plant. After a thorough review of all the alternatives, the City has opted to construct a new water plant utilizing membrane filtration.

The Environmental Protection Agency has taken an aggressive approach to ensuring surface water plants that serve over 10,000 persons are in compliance with the Disinfection By-Product Rule and the Long Term 2 Enhanced Surface Water Rule. As a result, it is necessary to construct a new water treatment plant. By incorporating the membrane filtration technology into the City's water treatment system, the City will be able to handle current, proposed and pending regulations.

**Table 10.1 Westminster Area Water Demand, 1995 – 2025**

Population						
Year	City	Total Service Area	Gallons / Person / Day	City Population Projected Water Demand (gal/day)	Total Service Area Population Projected Demand (gal/day)	Projected Demand Plus 25% Unaccounted Water (gal/day)
1995	15,317	27,806	86	1,317,262	2,391,350	2,989,188
2000	16,731	28,200	86	1,438,866	2,425,200	3,031,468
2005	17,974	31,846	86	1,545,764	2,738,722	3,423,402
2010	20,224	34,269	86	1,739,264	2,947,160	3,683,950
2015	21,418	35,878	86	1,841,948	3,085,474	3,856,842
2020	22,232	37,006	86	1,911,952	3,182,533	3,978,167
2025	23,415	37,811	86	2,013,690	3,251,729	4,064,661

Source: City of Westminster Department of Planning and Public Works

## Goals & Objectives

The following goals, which relate specifically to water and sewerage planning, were developed within the framework of the County Master Plan goals. Recommended actions are included here as well as in *Chapter Fourteen, Plan Implementation*.

### **Goal 1: Establish optimal and cost-effective facilities that will be available at the time of development.**

Recommended actions:

- a. Continue to provide for the future public water and sewer systems by including projects in the Capital Improvements Program.
- b. Monitor the available capacity of the water supply and sewage treatment plant so that expansions can be timed as needed.

**Goal 2: Achieve planned densities adopted in the County Master Plan, as reflected in the individual Comprehensive Plans for each of the community planning areas, through the establishment or extension of public water and sewerage systems.**

Recommended actions:

- a. Address extensions of the public water and sewerage systems through a comprehensive review during the triennial update of the *Carroll County Water and Sewerage Master Plan*.
- b. Consider the timing and location of development when reviewing the water and sewer systems for expansion.

**Goal 3: Manage the County's water resources to maintain, and where possible improve, water quality and quantity.**

Recommended actions:

- a. Complete the actions for *Chapter 2, Environmental Resources*, which address the protection of water resources.
- b. Secure funding through the Maryland Water Quality Revolving Loan Fund to construct a new Water Treatment Plant using Membrane Filtration Technology.

**Goal 4: Identify and permit new water supplies. Where possible, ensure that new development explores new water sources and provide capital to develop those sources.**

Recommended actions:

- a. Continue new well development where possible.
- b. As the top priority of the City of Westminster, with respect to public utilities, develop water sources that provide long term as well as emergency water supplies.

**Goal 5: Provide for the treatment and disposal of septage and sludge which are generated in the County by individual and community sewerage systems and identify innovative methods of treatment and disposal.**

Recommended actions:

- a. Continue to provide for the future sewer system by including projects in the Capital Improvements Program.
- b. Monitor the available capacity of the sewage treatment plant so that expansions can be timed as needed.
- c. Consider the use of innovative methods of sewage treatment and disposal when expanding the public sewer system.
- d. Complete the Enhanced Nutrient Removal project at the Wastewater Treatment Plant.